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arose from having neglected to study in certain species the phenomena of the second reduction mitosis.

The preceding observations apply only to the spermatogenesis. Wilson has recently shown that in *Anasa tristis*, *Protenor belfragei* and *Alydus pilosulus* there is one less chromosome in the spermatogonia than in the ovogonia, and from this most important observation has drawn interesting conclusions relating particularly to the determination of sex. Before the receipt of this last note by Wilson I had determined that this is the case in *Anasa* sp. also.

These observations with further ones on other families will be detailed in a later publication. A point to which I would again draw attention is the value of chromosomal relations as a taxonomic character, discussed in a preceding paper, and within a few months reiterated by McClung. The number of the chromosomes is less constant than relations of behavior. All the Coreidæ have one monosome and a pair of diplosomes; the monosome divides in the first maturation division, probably equationally, but never in the second; the diplosomes conjugate in the growth period of the spermatocytes, remain united until they become separated by a reduction division in the first maturation mitosis, then each divides equationally in the second. The Pentatomidæ possess no monosomes; all have one pair of diplosomes (*Trichopepla* possibly two), which regularly conjugate in the early growth period, later separate, each divides equationally in the first maturation division, they conjugate again in the second spermatocyte and there this bivalent diplosome becomes reductionally divided. Thus one family has only diplosomes, the other these as well as a monosome; in the one the diplosomes divide first equationally, then reductionally, while in the other family the sequence of the divisions is just the reverse.

The conviction almost forces itself upon one that chromosomal relations not only furnish the basis for any understanding of the processes called heredity and differentiation,

but also bid fair to become the basis of taxonomy.

THOS. H. MONTGOMERY, JR.

November 24, 1905.

SCIENTIFIC NOTES AND NEWS.

THE American Association for the Advancement of Science and six affiliated societies are meeting in New Orleans as we go to press. We hope to publish next week the official report of the meeting. Reports of the societies meeting with the association at New Orleans and of those meeting in Ann Arbor, New York and elsewhere will follow as soon as possible. Professor Dr. W. H. Welch, professor of pathology at the Johns Hopkins University, has been elected president of the association.

PROFESSOR WILLIAM JAMES, of Harvard University, has been elected president of the American Philosophical Association.

PROFESSOR JAMES R. ANGELL, of the University of Chicago, has been elected president of the American Psychological Association.

M. HENRI MOISSAN, professor of chemistry at Paris, has been elected a foreign member in the Munich Academy of Sciences, and Dr. Warburg, the president of the Reichsanstalt, and Dr. Karl Chunn, professor of zoology at Leipzig, have been elected corresponding members.

MR. OTTO VEACH has been appointed state geologist of Georgia.

DR. MAX UHLE, who for the past seven years has been engaged in archeological research in Peru as the head of the Hearst Expedition for the University of California, has concluded the field work of the Hearst Expedition and has accepted the position of director of the National Archeological Museum of Peru. In a letter received from Dr. Max Uhle he states that the government of Peru will prohibit the exploration of archeological sites by foreigners, unless under the direction of the government, and will also prohibit all exportation of archeological objects after January 1, 1906.

WE learn from *The Botanical Gazette* that Dr. J. C. Arthur, of Purdue University, is preparing the manuscript on the plant rusts of North America for the 'North American

Flora.' Any assistance through the gift of duplicate specimens or the loan of herbarium sheets will be greatly appreciated.

DR. AUGUST BRAUER, professor of zoology, at Marburg, has been appointed director of the Zoological Museum of the University of Berlin.

DR. A. SCATTENFROH, associate professor of hygiene at the University of Vienna, has been promoted to a professorship and made director of the Institute of Hygiene.

DR. L. FROBENIUS, the well-known German ethnologist, has undertaken an expedition to the region of the Kasai for the study of the native tribes of that part of Africa.

MR. ALEXANDER AGASSIZ, of Harvard University, sailed for Liverpool, on December 30.

PROFESSOR W. A. KELLERMAN will spend the winter in Guatemala with a view to carrying forward the mycological researches begun there last winter.

MAYOR WEAVER has announced the appointment of the following advisory board of physicians to assist Dr. W. M. L. Coplin, of the Philadelphia State Board of Health, in the execution of his plans: Drs. S. Weir Mitchell, John H. Musser, John M. Anders, Hobart A. Hare, J. William White and Henry Leffmann.

DR. WILLIAM STIRLING, recently appointed Fullerian professor of physiology at the Royal Institution, London, will deliver a course of six lectures on 'Food and Nutrition,' at the institution during the months of February and March.

A MEMORIAL to Professor Albert von Kölliker will be erected in Würzburg by the German Anatomical Society, of which he was an honorary president.

WE learn from *Nature* that it is proposed to erect a statue in Freiburg, Saxony, to the memory of the late Professor Dr. Clemens Winkler, who was professor in the Royal Mining Academy at Freiburg, and died in Dresden last year. The proposed memorial is to take the form of a large block of granite decorated with a medallion picture of the deceased investigator and a short account of his life's work.

THE *British Medical Journal* states that Dr. Czerny, professor of surgery at Heidelberg, has founded a gold medal in memory of his father-in-law, the clinician Kussmaul, who died in 1903. The medal, together with a prize of \$250, will be awarded every three years for the best German research on therapeutics.

A MEETING to commemorate the hundredth anniversary of the birth of Josef Skoda, known for his study of physical methods of examination and as the founder of the Vienna Medical School, was held on December 11. The bronze bust of Skoda in the hall of the university was decorated with flowers and an address was given by his pupil and successor, Professor von Schrötter.

WALTER B. HILL, chancellor of the University of Georgia, died on December 28.

THE death is announced of Dr. Otto Stolz, professor of mathematics at Innsbruck.

THE United States Civil Service Commission announces an examination on January 24-25, 1906, to fill a vacancy in the position of miscellaneous computer at the United States Naval Observatory, and other similar vacancies as they may occur. Miscellaneous computers are paid by the hour and earn from \$800 to \$1,000 per annum.

The Geographical Journal, quoting from the *Zeitschrift* of the Berlin Geographical Society (1905, No. 7), states that a scheme has been drawn up for the systematic investigation of the geography of the German African territories. Hitherto, it is felt, much has been lost by the dissipation of energy among various channels, and it is hoped that more valuable results will be gained by the concentration of effort under one organization. The scheme is the result of the deliberations of a committee appointed last year for the purpose, and it is proposed to carry out the objects in view by stationing scientific observers at government stations, attaching them to expeditions, and similar methods. The scope of their researches will embrace 'all branches of scientific knowledge which have to do with the earth's surface, its vegetable, animal and human inhabitants.'

WE learn from the *Journal of the American Medical Association* that the Copenhagen and the Berlin academies of science have united in publishing a catalogue of all the Greek and Latin medical writings that have been handed down to us from antiquity. This catalogue is to be preliminary to the suggestion that the International Association of Academies of Science undertake the task of publishing a complete scientific edition of the collected works of the physicians of antiquity. The plan is to be proposed at the next general meeting of the delegates of the association, which will be held at Vienna during the spring of 1907.

UNIVERSITY AND EDUCATIONAL NEWS.

By the will of the late Dr. George S. Hyde, \$50,000, the income of which is to be paid to his brother and sister during their lifetime, will on their deaths revert to the Harvard Medical School, to be used as the trustees of the college see fit.

THE following buildings are under course of construction at the University of Arkansas: a dairy building, an agricultural hall, an additional boy's dormitory, a woman's dormitory, a chemical building.

At the recent special session of the state legislature the University of Wisconsin was again authorized to draw its income from the general fund of the state treasury, as according to the new method of appropriating funds for the university by setting aside two-sevenths of a mill on all taxes, the university income fund does not become available until February each year, whereas the university budget has always been estimated on the basis of the fiscal year, which extends from July 1 to June 30 of each year. A misunderstanding of the circumstances gave rise to a report that the university had a deficit, but the report of the legislative committee appointed to consider the matter exonerated the university authorities completely and showed that at the end of the fiscal year next June there will be a surplus, not a deficit, in the university accounts. On this point the report states: "According to the budget for the present year

it is estimated that the present appropriations for the university are ample and will meet all expenses in maintaining the institution, and will leave a balance on hand for the fiscal year ending June 30, 1906." "That the two-sevenths mills tax," the report points out, "together with a special appropriation of \$200,000, both provided for by chapter 320 of the laws of 1905, it is estimated will provide enough money to pay for the permanent improvements above mentioned [the purchase of land and preparation for additional buildings] over and above the amount required for other purposes."

DR. GEORGE W. ATHERTON has resigned the presidency of the Pennsylvania State College.

MISS ALICE L. DAVISON, Ph.D. (Pennsylvania), has been appointed teacher of chemistry in the College for Women, Columbia, S. C.

DR. A. J. EWART, special lecturer in vegetable physiology, Birmingham University, has been appointed professor of botany in the University of Melbourne, in succession to the late Baron von Müller.

THE Council of King's College, London, has elected Mr. Harold A. Wilson, M.A., D.Sc., M.Sc., fellow of Trinity College, Cambridge, to the chair of physics vacated by Professor W. Grylls Adams, F.R.S.

PROFESSOR RHYS DAVIS, secretary of the Royal Asiatic Society, has been appointed professor of comparative religions at Manchester University.

DR. G. A. BUCKMASTER has been appointed assistant professor of physiology at University College, London University.

THE general board of studies of Cambridge University has appointed Mr. J. G. Leatham, M.A., fellow of St. John's College, university lecturer in mathematics until Michaelmas, 1910, and has reappointed Mr. C. T. R. Wilson, M.A., F.R.S., fellow of Sidney Sussex College, lecturer in experimental physics for five years from Christmas, 1905.

MR. WILLIAM WRIGHT, D.Sc., M.B., Ch.B., F.R.C.S., has been appointed lecturer on anatomy at the Middlesex Hospital Medical School.